Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A communication method for use in a dynamic network comprising:

allocating network resources of a dynamic network to a data stream based upon precedence levels of other data streams desiring the same resources or already utilizing the same ~~resources.~~resources,

_____ wherein nodes are configured to track control signaling in a routing database and use this retained information to ensure that low precedence control is not forwarded into portions of the network known to require higher precedence.

2.   (Previously Presented) The method recited in Claim 1 further comprising:

finding routes from a source to a destination that can be supported at a given precedence.

3.   (Currently Amended) The method recited in Claim 2 wherein the nodes ~~track control signaling in a routing database and~~ are further configured to use ~~this~~the retained information to ~~either~~ facilitate a route request. ~~request or to ensure that low precedence control is not forwarded into portions of the network known to require higher precedence.~~

4.   (Currently Amended) The method recited in Claim 2 comprising:

establishing a primary route for data flow of a given precedence from a first node to a second node of the network using resources available at that precedence or lower;

establishing a secondary route for data flow from the first node to the second node using resources available at that precedence or lower;

upon the occurrence of a failure of the primary route, switching the data flow from the primary route to the secondary route;

establishing a new secondary route for data flow from the first node to the second node using signaling directed only to resources known to not be restricted to higher precedence levels; and

repeating the above steps again and again as intra-node links of the network are established and broken.

5.   (Original) The method recited in Claim 4 wherein:

if a higher precedence flow is switched to a secondary route used by a lower precedence flow, the lower precedence flow is switched to its secondary route.

6.   (Original) The method recited in Claim 4 wherein secondary routes at each precedence level are monitored for quality by:

sending low rate probe messages through the secondary routes;

if a fault is detected in a secondary route, establishing a new secondary route, even though the new secondary route might never be used; and

if a secondary route is preempted by a flow with higher precedence, a new secondary route is established for the lower precedence flow.

7.   (Currently Amended) The method recited in Claim 4 ~~wherein~~ further comprising:

exchanging ~~communication between nodes utilizes~~ control messages ~~are exchanged~~ at a low rate between software agents at nodes of the network and ~~are forwarded~~forwarding the control messages along active and secondary routes.

8.   (Original) The method recited in Claim 7 wherein the control messages are handled at the same precedence level as their flows.

9.   (Original) The method recited in Claim 7 wherein the agents respond to requests from other agents for node status, arbitrate resource allocation according to

precedence, assess route failure probability, initiate restoral switchover, and maintain a local routing database.

10.   (Original) The method recited in Claim 1 wherein network resource allocation is based upon link bandwidth.

11-13. (Canceled)

14.   (Currently Amended) A communication method for use in a dynamic network comprising:

allocating network resources to a data stream based upon precedence levels of other data streams desiring the same resources or already utilizing the same resources; and

finding routes from a source to a destination that can be supported at a given precedence ~~level.~~level,

_____ wherein nodes are configured to track control signaling in a routing database and use this retained information to unsure that low precedence control is not forwarded into portions of the network known to require higher precedence.

15.   (Currently Amended) The method recited in Claim 14 wherein the nodes ~~track control signaling in a routing database and~~are further configured to use ~~this~~the retained information to ~~either~~facilitate a route ~~request~~request.~~or to unsure that low precedence control is not forwarded into portions of the network known to require higher precedence.~~

16.   (Currently Amended) The method recited in Claim 14 comprising:

establishing a primary route for data flow of a given precedence from a first node to a second node of the network using resources available at that precedence or lower;

establishing a secondary route for data flow from the first node to the second node using resources available at that precedence or lower;

upon the occurrence of a failure of the primary route, switching the data flow from the primary route to the secondary route;

establishing a new secondary route for data flow from the first node to the second node using signaling directed only to resources known to not be restricted to higher precedence levels; and

repeating the above steps again and again as intra-node links of the network are established and broken.

17.   (Previously Presented) The method recited in Claim 16 wherein:

if a higher precedence flow is switched to a secondary route used by a lower precedence flow, the lower precedence flow is switched to its secondary route.

18.   (Previously Presented) The method recited in Claim 16 wherein secondary routes at each precedence level are monitored for quality by:

sending low rate probe messages through the secondary routes;

if a fault is detected in a secondary route, establishing a new secondary route, even though the new secondary route might never be used; and

if a secondary route is preempted by a flow with higher precedence, a new secondary route is established for the lower precedence flow.

19.   (Currently Amended) The method recited in Claim 16 ~~wherein~~further comprising:

exchanging ~~communication between nodes utilizes~~ control messages ~~are exchanged~~ at a low rate between software agents at nodes of the network and ~~are forwarded~~forwarding the control messages along active and secondary routes.

20.   (Previously Presented) The method recited in Claim 19 wherein the control messages are handled at the same precedence level as their flows.